



Protein



"Growing up healthy and strong!"

Why do we need protein?

- ◆ growth (especially children, teens, pregnant women)
- ◆ tissue repair
- ◆ to make essential hormones and enzymes in the body
- ◆ for energy if other energy sources, like carbohydrates, are not available

How much protein do we need?

- ◆ Most Americans get plenty of protein.
- ◆ You only need about 15-20% of your daily calories from protein.
- ◆ The Recommended Dietary Allowance (RDA) for most healthy adults* is approximately 50-60 grams of protein per day.

**The RDA for growing children, adolescents, and pregnant women is greater.*

The table below lists some common protein sources in the diet. You can see how easy it is to get the recommended amount.

<i>Food source</i>	<i>Grams of protein</i>
4 ounces grilled chicken breast	34
4 ounces broiled lean steak	27
1/2 cup cottage cheese	14
1 cup cooked kidney beans	13
2 tablespoons peanut butter	8
8 ounces milk (1% fat)	7
4 ounces tofu	7
1 egg	6
4 ounces cooked pasta noodles	6
2 slices whole wheat bread	5

The source of protein can be important. Protein is made up of building blocks called *amino acids*. Your body makes some amino acids. These are called *nonessential amino acids*. Other amino acids must come from the foods you eat. These are called *essential amino acids*. A protein with all the essential amino acids is considered a higher quality or *complete protein*. Animal sources of protein such as meat, milk and eggs are complete proteins.

A protein lacking one or more essential amino acids is considered to be an *incomplete protein*. Plant sources of protein don't contain all the essential amino acids your body needs and are considered incomplete proteins.

How can I be sure I am getting enough complete protein?

You can still get all of your essential amino acids from vegetable or plant sources if you eat a variety of plant-based foods. Eating a diet based on the servings and amounts recommended in the Food Guide Pyramid is a healthy approach:

- ◆ 6-11 servings/day grains, cereals, rice and pasta
- ◆ 2-4 servings/day fruits
- ◆ 3-5 servings/day vegetables
- ◆ 2-3 servings/day milk products
- ◆ 2-3 servings/day meat, poultry, fish, eggs, beans and nuts

Don't athletes need more protein?

Extra protein in the diet isn't usually necessary. Contrary to popular belief, eating more protein won't give you more muscle. *The only way to make your muscles bigger is to exercise the muscles.* If you eat too much protein, the extra amount that is not needed for growth and repair is just extra calories. Extra calories, whether they are from carbohydrate, protein or fat get stored as *body fat*.

Words to know

Essential amino acids - those amino acids that our bodies cannot make and we must get from food

Nonessential amino acids- those amino acids that our bodies are able to make

Complete protein - protein source containing all of the essential amino acids

Incomplete protein - protein source missing one or more essential amino acids